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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/025,969	12/26/2001	Solon J. Spiegel	P-3856-US	2209
27130	7590	04/28/2005	EXAMINER	
EITAN, PEARL, LATZER & COHEN ZEDEK LLP 10 ROCKEFELLER PLAZA, SUITE 1001 NEW YORK, NY 10020			BAYARD, EMMANUEL	
			ART UNIT	PAPER NUMBER
			2631	

DATE MAILED: 04/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/025,969	SPIEGEL ET AL. 	
	Examiner	Art Unit	
	Emmanuel Bayard	2631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>12/26/01</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-27 are rejected under 35 U.S.C. 102(e) as being anticipated by Strolle et al U.S. patent No 6,169,767 B1.

As per claims 1 and 23, Strolle et al teaches apparatus comprising: a variable rate modulator for producing baseband modulated signal is the same as the claimed (baseband module) (see figs. 2, 4 element 218 and col.1, lines 53-60 and col.4, lines 28-36) adapted to filter (see fig.4 element 2183 and col.4, lines 35-65 and col.5, line 21 and col.6, lines 33-45) a modulated signal by programming an impulse response of a filter to a programmable convolver (see figs. 5-6 elements 530I or 530Q and col.7, lines 28-67).

As per claim 2, Strolle et al teaches wherein the baseband module further comprises: a memory to store (see fig.5 element 520 and col.7, lines 50-55) the impulse response of the filter; and a digital to analog converter (DAC) (see fig.2 element 220 and col.4, line 30) to provide a time phase of a stored impulse response of the filter to the programmable convolver.

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As per claim 3, Strolle et al teaches wherein the baseband module further comprises: a power control is the same as the claimed (automatic gain control to control) (see fig.2 element S34 and col.4, line 15-16 and col.7, lines 21-23) an output signal level of the programmable convolver.

As per claim 4, Strolle et al teaches, wherein the baseband module further comprises: a filter (see fig.4 element 21811 operably coupled to an input of the programmable convolver to filter the modulated signal, wherein an impulse response (see col.4, lines 55-65) of the filter is programmed according to modulated signal characteristics.

As per claim 5, Strolle et al inherently teaches wherein a resolution of the DAC and a sampling rate of the DAC are set according to the modulated signal characteristics.

As per claim 6, Strolle et al inherently teaches, wherein a length of the impulse response is set according the modulated signal characteristics.

As per claim 7, Strolle et al inherently teaches, further comprising a second DAC.

As per claim 8, Strolle et teaches wherein the memory comprises an impulse response of a first filter and an impulse response of a second filter, and the programmable convolver is programmed with one of the impulse response of the first filter and the impulse response of the second filter according to the modulated signal characteristics (see fig.5 element 520 and col.7, lines 50-67)

As per claim 9, Strolle et al teaches, wherein the programmable convolver is a complex programmable convolver (see fig.5 and col.7, lines 28-30).

As per claim 10, Strolle et al teaches, wherein the filter is a programmable convolver having an analog output (see fig.2 element 220).

As per claim 11, Strolle et al teaches apparatus comprising: a multi-mode receiver to receive signals of two communication systems, wherein the receiver is adapted to select (switch) between modes (see col.3, lines 8-15 and col.4, lines 25-28, 33-35) by programming a variable rate modulator for producing baseband modulated signal is the same as the claimed (baseband module) (see figs. 2, 4 element 218 and col.1, lines 53-60 and col.4, lines 28-36) according to characteristics of a received signal; and a memory to store (see fig.5 element 520 and col.7, lines 50-55) a first impulse response and a second impulse response to program a filter (see fig.4 element 2183 and col.4, lines 35-65 and col.5, line 21 and col.6, lines 33-45) of the baseband module.

As per claim 12, Strolle et al teaches wherein the baseband module comprises: an in-phase (I) channel to filter an I signal of a modulated signal and a quadrature (Q) channel to filter a Q signal of the modulated signal (see fig.5 elements 530I and 530Q)

As per claim 13, Strolle et al teaches wherein the I channel comprises: a first filter having a programmable frequency response, operably coupled to an input of a ROM is the same as the claimed (buffer) (see fig.5 element 520); and a second filter having a programmable frequency response, operably coupled to an output of the ROM

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(buffer) (see fig.5 element 520) and to an input of a programmable convolver (see col.7, lines 30-67).

As per claim 14, Strolle et al teaches, wherein the I channel further comprises: digital to analog converters (DACs) (see fig.2 element 220) operably coupled to the programmable convolver, wherein the DACs comprise an adjustable sampling rate and an adjustable resolution.

As per claim 15, Strolle et al teaches, wherein the I channel further comprises: a power control is the same as the claimed (automatic gain control) (see fig.2 element S34) operably coupled to the programmable convolver to control a signal level of the programmable convolver and to provide an average amplitude level at the programmable convolver output.

As per claim 16, Strolle et al teaches wherein the I channel comprises: a first filter having a programmable frequency response, operably coupled to an input of a ROM is the same as the claimed (buffer) (see fig.5 element 520); and a second filter having a programmable frequency response, operably coupled to an output of the ROM (buffer) (see fig.5 element 520) and to an input of a programmable convolver (see col.7, lines 30-67).

As per claim 17, Strolle et al teaches, wherein the I channel further comprises: digital to analog converters (DACs) (see fig.2 element 220) operably coupled to the programmable convolver, wherein the DACs comprise an adjustable sampling rate and an adjustable resolution.

As per claim 18, Strolle et al teaches, wherein the I channel further comprises: a power control is the same as the claimed (automatic gain control) (see fig.2 element S34) operably coupled to the programmable convolver to control a signal level of the programmable convolver and to provide an average amplitude level at the programmable convolver output.

As per claim 19, Strolle et al inherently teaches wherein the multi-mode receiver is a direct conversation multi-mode receiver.

As per claim 20, Strolle et al teaches wherein the I channel and the Q channel comprise programmable complex convolvers (see fig.5 elements 530I and 530Q).

As per claim 21, Strolle et al inherently teaches, wherein the first filter and the second filter are programmable convolvers.

As per claim 22, Strolle et al inherently teaches, wherein the first filter and the second filter are programmable convolvers.

As per claim 24, Strolle et al inherently teaches further comprising: setting a frequency response of a filter by modifying the structure of the filter and setting the number of poles of the filter.

As per claim 25, Strolle et al inherently teaches further comprising: setting a sampling rate and a resolution to a digital to analog converter to switch between receiving modes of the multi-mode receiver.

As per claim 26, Strolle et al inherently teaches, further comprising; setting a length of the impulse response according to a received signal characteristic.

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As per claim 27, Strolle et al inherently teaches, further comprising: providing a combined analog and digital gain control to control a signal level of the programmable convolver.

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Tanaka et al U.S. patent No 5,598,478 teaches a sound image.

Fague et al U.S. patent No 5,768,317 teaches an equalization filter.

Lehman et al U.S. patent No 6,282,184 B1 teaches a common digitizing rate.

Heard U.S. patent No 6,256,485 B1 teaches a wideband radio receiver.

Dent U.S. patent No 6,404,821 B1 teaches a digital beamformer for receiving a first number.

Fischer et al U.S. patent no 6,215,429 B1 teaches a distributed gain.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emmanuel Bayard whose telephone number is 571 272 3016. The examiner can normally be reached on Monday-Friday (7:Am-4:30PM) Alternate Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammed Ghayour can be reached on 571 272 3021. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Emmanuel Bayard
Primary Examiner
Art Unit 2631

4/20/05

EMMANUEL BAYARD
PRIMARY EXAMINER

